

IN THE CLAIMS:

1. (Currently amended) A computing system, comprising:

a computer card, wherein the computer card comprises:

a frame;

a printed circuit board mounted to the frame;

a CPU comprised on the printed circuit board;

a memory comprised on the printed circuit board;

a non-volatile memory comprised on the frame;

human interface logic comprised on the printed circuit board which is operable to receive one or more human interface signals and encode the one or more human interface signals into a format suitable for transmission to a remote location; and

a human interface connector coupled to the human interface logic, wherein the human interface connector is ~~adapted~~ configured to couple to one or more cables for transmission of the encoded one ~~one~~ or more human interface signals to the remote location.

2. (Original) The computing system of claim 1, wherein the human interface logic is operable to encode the one or more human interface signals into a format suitable for transmission of a distance greater than 20 feet to the remote location.

3. (Original) The computing system of claim 1, wherein the human interface logic is operable to receive two or more human interface signals and encode the two or more human interface signals into a format suitable for transmission to the remote location.

4. (Original) The computing system of claim 3, wherein the two or more human interface signals comprise two or more of a video signal, keyboard signal, and pointing device signal.

5. (Original) The computing system of claim 3, wherein the two or more human interface signals comprise three or more of a video signal, keyboard signal, pointing device signal, and audio signal.

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6. (Original) The computing system of claim 1, further comprising keyboard logic comprised on the printed circuit board for interfacing to a keyboard; wherein the keyboard logic is coupled to the human interface logic; wherein the keyboard logic generates keyboard signals that are provided to the human interface logic, wherein the one or more human interface signals include the keyboard signals; wherein the human interface logic is operable to receive the keyboard signals; and wherein the human interface logic is operable to encode the keyboard signals into a format suitable for transmission to the remote location.

7. (Original) The computing system of claim 1, further comprising pointing device logic comprised on the printed circuit board for interfacing to a pointing device; wherein the pointing device logic is coupled to the human interface logic; wherein the pointing device logic generates pointing device signals that are provided to the human interface logic, wherein the one or more human interface signals include the pointing device signals; wherein the human interface logic is operable to receive the pointing device signals; and wherein the human interface logic is operable to encode the pointing device signals into a format suitable for transmission to the remote location.

8. (Original) The computing system of claim 1, further comprising: keyboard logic comprised on the printed circuit board for interfacing to a keyboard; and pointing device logic comprised on the printed circuit board for interfacing to a pointing device;

wherein each of the keyboard logic and the pointing device logic is coupled to the human interface logic;

wherein the keyboard logic generates keyboard signals that are provided to the human interface logic;

wherein the pointing device logic generates pointing device signals that are provided to the human interface logic; and

wherein the encoded one or more human interface signals include encoded keyboard signals and encoded pointing device signals.

9. (Original) The computing system of claim 1, further comprising USB logic comprised on the printed circuit board for interfacing to a USB device;

wherein the USB logic is coupled to the human interface logic;

wherein the USB logic generates USB signals that are provided to the human interface logic, wherein the one or more human interface signals include the USB signals;

wherein the human interface logic is operable to receive the USB signals; and

wherein the human interface logic is operable to encode the USB signals into a format suitable for transmission to the remote location.

10. (Original) The computing system of claim 1, further comprising video logic comprised on the printed circuit board for interfacing to a video display device;

wherein the video logic is coupled to the human interface logic;

wherein the video logic generates video signals that are provided to the human interface logic, wherein the one or more human interface signals include the video signals;

wherein the human interface logic is operable to receive the video signals; and

wherein the human interface logic is operable to encode the video signals into a format suitable for transmission to the remote location.

11. (Original) The computing system of claim 1, further comprising audio logic comprised on the printed circuit board for interfacing to an audio device;

wherein the audio logic is coupled to the human interface logic;

wherein the audio logic generates audio signals that are provided to the human interface logic, wherein the one or more human interface signals include the audio signals;

wherein the human interface logic is operable to receive the audio signals; and

wherein the human interface logic is operable to encode the audio signals into a format suitable for transmission to the remote location.

12. (Original) The computing system of claim 1, further comprising network interface logic comprised on the printed circuit board for interfacing to a network, wherein the network logic is operable to encode network signals into a format suitable for transmission to the network.

13. (Original) The computing system of claim 1, further comprising a power supply comprised on the frame, wherein the power supply is operable to couple to an external power source and supply power to the computing system.

14. (Currently amended) The computing system of claim 1, further comprising:

a cage having a plurality of slots, wherein the computer card is ~~adapted~~ configured to be inserted into a slot of the cage, wherein the cage includes a cage connector which is ~~adapted~~ configured to couple to the human interface connector on the computer card, wherein the cage connector also includes an external second connector electrically coupled to the cage connector, wherein the external second connector is ~~adapted~~ configured for coupling to the one or more cables for transmission of the encoded one or more human interface signals to the remote location.

15. (Currently amended) A computing system, comprising:  
a computer card, wherein the computer card comprises:

a frame;

a printed circuit board mounted to the frame;

a CPU comprised on the printed circuit board;

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a memory comprised on the printed circuit board;  
a non-volatile memory comprised on the frame;  
a human interface connector ~~adapted~~ configured to couple to one or more cables for reception of encoded one or more human interface signals from a remote location, wherein the encoded one or more human interface signals are encoded in a format suitable for transmission from the remote location to the computing system; and

human interface logic comprised on the printed circuit board and coupled to the human interface connector, wherein the human interface logic is operable to receive the encoded one or more human interface signals from the remote location, wherein the human interface logic is operable to decode the encoded one or more human interface signals to produce decoded human interface signals;

wherein the decoded human interface signals are useable in the computing system.

16. (Original) The computing system of claim 15, wherein the human interface logic is operable to decode the one or more human interface signals from a format suitable for transmission of a distance greater than 20 feet from the remote location.

17. (Original) The computing system of claim 15, wherein the human interface logic is operable to receive incoming encoded two or more human interface signals from the remote location and decode the encoded two or more human interface signals from a format suitable for transmission from the remote location.

18. (Original) The computing system of claim 17, wherein the incoming encoded two or more human interface signals comprise two or more of an incoming encoded video signal, keyboard signal, and pointing device signal.

19. (Original) The computing system of claim 17, wherein the incoming encoded two or more human interface signals comprise three or more of an incoming encoded video signal, keyboard signal, pointing device signal, and audio signal.

20. (Original) The computing system of claim 15, further comprising keyboard logic comprised on the printed circuit board for interfacing to a keyboard; wherein the keyboard logic is coupled to the human interface logic; wherein the human interface logic is operable to receive the keyboard signals from the remote location; wherein the human interface logic is operable to decode the encoded keyboard signals from a format suitable for transmission from the remote location; wherein the keyboard logic receives the decoded keyboard signals from the human interface logic; and wherein the decoded human interface signals include the decoded keyboard signals.

21. (Original) The computing system of claim 15, further comprising pointing device logic comprised on the printed circuit board for interfacing to a pointing device; wherein the pointing device logic is coupled to the human interface logic; wherein the human interface logic is operable to receive the pointing device signals from the remote location; wherein the human interface logic is operable to decode the encoded pointing device signals from a format suitable for transmission from the remote location; wherein the pointing device logic receives the decoded pointing device signals from the human interface logic; and wherein the decoded human interface signals include the decoded pointing device signals.

22. (Original) The computing system of claim 15, further comprising:

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keyboard logic comprised on the printed circuit board for interfacing to a keyboard; and

pointing device logic comprised on the printed circuit board for interfacing to a pointing device;

wherein each of the keyboard logic and the pointing device logic is coupled to the human interface logic;

wherein the keyboard logic receives decoded keyboard signals that are provided by the human interface logic;

wherein the pointing device logic receives decoded pointing device signals that are provided by the human interface logic; and

wherein the decoded human interface signals include the decoded keyboard signals and the decoded pointing device signals.

23. (Original) The computing system of claim 15, further comprising USB logic comprised on the printed circuit board for interfacing to a USB device;

wherein the USB logic is coupled to the human interface logic;

wherein the human interface logic is operable to receive encoded USB signals from the remote location;

wherein the human interface logic is operable to decode the encoded USB signals from a format suitable for transmission from the remote location;

wherein the USB logic receives the decoded USB signals from the human interface logic; and

wherein the decoded human interface signals include the decoded USB signals.

24. (Original) The computing system of claim 15, further comprising video logic comprised on the printed circuit board for interfacing to a video display device;

wherein the video logic is coupled to the human interface logic;

wherein the human interface logic is operable to receive encoded video signals from the remote location;

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wherein the human interface logic is operable to decode the encoded video signals from a format suitable for transmission from the remote location;

wherein the video logic receives the decoded video signals from the human interface logic; and

wherein the decoded human interface signals include the decoded video signals.

25. (Original) The computing system of claim 15, further comprising audio logic comprised on the printed circuit board for interfacing to an audio device;

wherein the audio logic is coupled to the human interface logic;

wherein the human interface logic is operable to receive encoded audio signals from the remote location;

wherein the human interface logic is operable to decode the encoded audio signals from a format suitable for transmission from the remote location;

wherein the audio logic receives the decoded audio signals from the human interface logic; and

wherein the decoded human interface signals include the decoded audio signals.

26. (Original) The computing system of claim 15, further comprising network interface logic comprised on the printed circuit board for interfacing to a network, wherein the network interface logic is operable to receive encoded network signals from the network and decode the encoded network signals.

27. (Original) The computing system of claim 15, further comprising a power supply comprised on the frame, wherein the power supply is operable to couple to an external power source and supply power to the computing system.

28. (Currently amended) The computing system of claim 15, further comprising:

a cage having a plurality of slots, wherein the computer card is ~~adapted~~ configured to be inserted into a slot of the cage, wherein the cage includes a cage connector which is ~~adapted~~ configured to couple to the human interface connector on the



computer card, wherein the cage connector also includes an external second connector electrically coupled to the cage connector, wherein the external second connector is ~~adapted~~ configured for coupling to the one or more cables for reception of the encoded one or more human interface signals from the remote location.

29. (Currently amended) A computing system, comprising:  
a computer card, wherein the computer card comprises:

- a frame;
- a printed circuit board mounted to the frame;
- a CPU comprised on the printed circuit board;
- a memory comprised on the printed circuit board;
- a non-volatile memory comprised on the frame;

human interface logic comprised on the printed circuit board which is operable to perform one or more of: 1) receiving one or more outgoing human interface signals and encoding the one or more outgoing human interface signals into a format suitable for transmission to a remote location or 2) receiving one or more incoming encoded human interface signals from the remote location and decoding the one or more incoming human interface signals into a format suitable for transmission to logic on the computing system;

a human interface connector coupled to the human interface logic, wherein the human interface connector is ~~adapted~~ configured to couple to one or more cables for communication of one or more of outgoing or incoming encoded human interface signals with the remote location; and

a power supply comprised on the frame, wherein the power supply is operable to couple to an external power source and supply power to the computing system.

30. (Original) The computing of claim 29, wherein the remote location is more than 20 feet from the computing system.

31. (Currently amended) A system comprising a plurality of computing systems, the system comprising:

a cage having a plurality of slots, wherein each of the slots is ~~adapted~~ configured to receive a computer card;

wherein each computer card comprises:

a frame;

a printed circuit board mounted to the frame;

a CPU comprised on the printed circuit board;

a memory comprised on the printed circuit board;

a non-volatile memory comprised on the frame;

human interface logic comprised on the printed circuit board which is operable to receive two or more human interface signals and encode the two or more human interface signals into a format suitable for transmission to a remote location;

a human interface connector coupled to the human interface logic, wherein the human interface connector is ~~adapted~~ configured to couple to one or more cables for transmission of the encoded two or more human interface signals to the remote location; and

a power supply comprised on the frame, wherein the power supply is operable to couple to an external power source and supply power to the computing system.

32. (Original) The system of claim 31, wherein each computer card further comprises network interface logic comprised on the printed circuit board for interfacing to a network.

33. (Currently amended) The system of claim 31, wherein each of the computer cards further includes one or more of video interface logic, keyboard interface logic, and pointing device logic for generating video signals, keyboard signals, and pointing device signals, respectively; and wherein the one or more of the video interface logic, keyboard interface logic, and pointing device logic are each ~~adapted~~ configured to couple to the human interface logic;

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A wherein the human interface logic is operable to receive one or more of the video signals, the keyboard signals, and the pointing device signals, and encode the signals into a format suitable for transmission to the remote location; and

wherein the encoded one or more of the video signals, the keyboard signals, and the pointing device signals, are comprised in the encoded human interface signals.

34. (Currently amended) The system of claim 31,

wherein each of the computer cards further includes one or more of audio interface logic and USB interface logic, for generating audio signals and USB signals, respectively;

wherein the one or more of the audio interface logic and the USB interface logic are each ~~adapted~~ configured to couple to the human interface logic;

wherein the human interface logic is operable to receive the one or more of the audio signals and the USB signals and encode the one or more of the audio signals and the USB signals into a format suitable for transmission to the remote location; and

wherein the encoded one or more of the audio signals and the USB signals are comprised in the encoded human interface signals.

35. (Currently amended) The system of claim 31,

wherein each of the computer cards further includes three or more of video interface logic, keyboard interface logic, pointing device logic, audio interface logic, and USB interface logic, for generating video signals, keyboard signals, pointing device signals, audio signals, and USB signals respectively; and

wherein the three or more of the video interface logic, keyboard interface logic, pointing device logic, audio interface logic, and USB interface logic are each ~~adapted~~ configured to couple to the human interface logic;

wherein the human interface logic is operable to receive the three or more of the video signals, keyboard signals, pointing device signals, audio signals, and USB signals, and encode the signals into a format suitable for transmission to the remote location; and

wherein the encoded three or more of the video signals, keyboard signals, pointing device signals, audio signals, and USB signals, are comprised in the encoded human interface signals.

36. (Currently amended) The system of claim 31,  
wherein the cage further comprises a cage connector which is ~~adapted~~ configured to couple to the human interface connector on each of the computer cards, wherein the cage connector also includes an external second connector ~~adapted~~ configured for coupling to the one or more cables for transmission of the encoded human interface signals to the remote location.

37. (Currently amended) The system of claim 36,  
wherein the cage connector is further ~~adapted~~ configured to couple to the network interface logic on each of the computer cards, wherein the external second connector is also ~~adapted~~ configured for coupling to one or more network cables for coupling each of the computer cards to the network.

38. (Currently amended) The system of claim 36,  
wherein each of the computer cards further includes one or more of video interface logic for generating video signals, keyboard interface logic for generating keyboard signals, and pointing device interface logic for generating pointing device signals; and

wherein the cage connector is further ~~adapted~~ configured to couple to the one or more of the video interface logic, the keyboard interface logic, and the pointing device interface logic on each of the computer cards, wherein the external second connector is also ~~adapted~~ configured for coupling to the one or more cables for transmission of the one or more of the video signals, the keyboard signals, and the pointing device signals, to the remote location.

39. (Currently amended) The system of claim 36,

wherein each of the computer cards further includes one or more of audio interface logic for generating audio signals and USB interface logic for generating USB signals; and

wherein the cage connector is further ~~adapted~~ configured to couple to the one or more of the audio interface logic and the USB interface logic on each of the computer cards, wherein the external second connector is also ~~adapted~~ configured for coupling to the one or more cables for transmission of the one or more of the audio signals and the USB signals to the remote location.

40. (Original) The system of claim 31,

wherein the human interface logic is operable to encode the one or more human interface signals into a format suitable for transmission of a distance greater than 20 feet to the remote location.

41. (Currently amended) A system comprising a plurality of computing systems, the system comprising:

a cage having a plurality of slots, wherein each of the slots is ~~adapted~~ configured to receive a computer card;

wherein each computer card comprises:

a frame;

a printed circuit board mounted to the frame;

a CPU comprised on the printed circuit board;

a memory comprised on the printed circuit board;

a non-volatile memory comprised on the frame;

human interface logic comprised on the printed circuit board which is operable to receive two or more encoded human interface signals from a remote location and decode the two or more human interface signals from a format suitable for transmission from the remote location;

a human interface connector coupled to the human interface logic, wherein the human interface connector is ~~adapted~~ configured to couple to one or more cables for reception of the encoded two or more human interface signals from the remote location;

a power supply comprised on the frame, wherein the power supply is operable to couple to an external power source and supply power to the computing system;

wherein the decoded human interface signals are useable by the computer card.

42. (Original) The system of claim 41, wherein each computer card further comprises network interface logic comprised on the printed circuit board for interfacing to a network.

43. (Currently amended) The system of claim 41, wherein each of the computer cards further includes one or more of video interface logic, keyboard interface logic, and pointing device logic for receiving encoded video signals, encoded keyboard signals, and encoded pointing device signals, respectively;

wherein the one or more of the video interface logic, keyboard interface logic, and pointing device logic are each ~~adapted~~ configured to couple to the human interface logic;

wherein the human interface logic is operable to receive one or more of the encoded video signals, the encoded keyboard signals, and the encoded pointing device signals from the remote location and , and decode the one or more of the encoded video signals , the encoded keyboard signals, and the encoded pointing device signals from a format suitable for transmission from the remote location; and

wherein the one or more of the encoded video signals, the encoded keyboard signals, and the encoded pointing device signals are comprised in the encoded human interface signals.

44. (Currently amended) The system of claim 41, wherein each of the computer cards further includes one or more of audio interface logic and USB interface logic for receiving encoded audio signals and encoded USB signals, respectively;

wherein the one or more of the audio interface logic and USB interface logic are each ~~adapted~~ configured to couple to the human interface logic;

wherein the human interface logic is operable to receive one or more of the encoded audio signals and the encoded USB signals from the remote location and , and decode the one or more of the encoded audio signals and the encoded USB signals from a format suitable for transmission from the remote location; and

wherein the one or more of the encoded audio signals and the encoded USB signals are comprised in the encoded human interface signals.

45. (Currently amended) The system of claim 41,

wherein each of the computer cards further includes three or more of video interface logic, keyboard interface logic, pointing device logic, audio interface logic, and USB interface logic, for receiving encoded video signals, encoded keyboard signals, encoded pointing device signals, encoded audio signals, and encoded USB signals respectively; and

wherein the three or more of the video interface logic, keyboard interface logic, pointing device logic, audio interface logic, and USB interface logic are each ~~adapted~~ configured to couple to the human interface logic;

wherein the human interface logic is operable to receive the three or more of the encoded video signals, the encoded keyboard signals, the encoded pointing device signals, the encoded audio signals, and the encoded USB signals, and decode the signals from a format suitable for transmission from the remote location; and

wherein the three or more of the encoded video signals, the encoded keyboard signals, the encoded pointing device signals, the encoded audio signals, and the encoded USB signals, are comprised in the encoded human interface signals.

46. (Currently amended) The system of claim 41,

wherein the cage further comprises a cage connector which is ~~adapted~~ configured to couple to the human interface connector on each of the computer cards, wherein the cage connector also includes an external second connector ~~adapted~~ configured for coupling to the one or more cables for reception of encoded human interface signals from a remote location.

47. (Currently amended) The system of claim 46,

wherein the cage connector is further ~~adapted~~ configured to couple to the network interface logic on each of the computer cards, wherein the external second connector is also ~~adapted~~ configured for coupling to one or more network cables for coupling each of the computer cards to the network.

48. (Currently amended) The system of claim 46,

wherein each of the computer cards further includes one or more of video interface logic for receiving video signals, keyboard interface logic for receiving keyboard signals, and pointing device interface logic for receiving pointing device signals; and

wherein the cage connector is further ~~adapted~~ configured to couple to the one or more of the video interface logic, the keyboard interface logic, and the pointing device interface logic on each of the computer cards, wherein the external second connector is also ~~adapted~~ configured for coupling to the one or more cables for reception of the one or more of the video signals, the keyboard signals, and the pointing device signals from the remote location.

49. (Currently amended) The system of claim 46,

wherein each of the computer cards further includes one or more of audio interface logic for receiving audio signals and USB interface logic for receiving USB signals; and

wherein the cage connector is further ~~adapted~~ configured to couple to the one or more of the audio interface logic and the USB interface logic on each of the computer cards, wherein the external second connector is also ~~adapted~~ configured for coupling to the one or more cables for reception of the one or more of the audio signals and the USB signals to the remote location.

50. (Original) The system of claim 41,



wherein the human interface logic is operable to encode the one or more human interface signals into a format suitable for transmission of a distance greater than 20 feet to the remote location.

51. (Currently amended) A system comprising a plurality of computing systems and corresponding human interfaces, the system comprising:

a cage having a plurality of slots, wherein each of the slots is ~~adapted~~ configured to receive a computer card;

wherein each computer card comprises:

a frame;

a printed circuit board mounted to the frame;

a CPU comprised on the printed circuit board;

a memory comprised on the printed circuit board;

a non-volatile memory comprised on the frame;

human interface logic comprised on the printed circuit board which is operable to perform one or more of: 1) receiving one or more outgoing human interface signals and encoding the one or more outgoing human interface signals into a format suitable for transmission to a remote location, or 2) receiving one or more incoming encoded human interface signals from the remote location and decoding the one or more incoming human interface signals into a format suitable for transmission to logic on the computing system;

a human interface connector coupled to the human interface logic, wherein the human interface connector is ~~adapted~~ configured to couple to one or more cables for communication of the one or more of outgoing or incoming encoded human interface signals with the remote location; and

a power supply comprised on the frame, wherein the power supply is operable to couple to an external power source and supply power to the computing system;

a plurality of human interfaces each located at a location remote from the cage, wherein each of the human interfaces includes a display device and at least one user input device; and

at least one cable coupled between each computer card and a corresponding one of the human interfaces, wherein each at least one cable is operable to communicate the one or more outgoing or incoming encoded human interface signals with the corresponding human interface.

52. (Original) The system of claim 51,  
wherein the remote location is further than 20 feet from the cage.

53. (Currently amended) The system of claim 51,  
wherein the cage further comprises a cage connector which is ~~adapted~~ configured to couple to the human interface connector on each of the computer cards, wherein the cage connector also includes an external second connector ~~adapted~~ configured for coupling to each of the one or more cables for communication of the one or more encoded outgoing or incoming human interface signals with the corresponding human interface.

54. (Currently amended) The system of claim 51,  
wherein each computer card further comprises network interface logic comprised on the printed circuit board for interfacing to a network; and  
wherein the cage further comprises a cage connector which is ~~adapted~~ configured to couple to the network interface logic on each of the computer cards, wherein the cage connector also includes an external second connector ~~adapted~~ configured for coupling to one or more network cables for coupling each of the computer cards to the network.